

What is claimed is:

- 1 1. A method for Internet telephony, comprising:
2 connecting a first telephone to a first switch using a first virtual circuit;
3 connecting a second telephone to a second switch using a second virtual circuit;
4 and
5 connecting the first switch to the second switch using a third virtual circuit.
- 1 2. The method of claim 1, further comprising:
2 receiving a data packet at the first switch from the first telephone through the first
3 virtual circuit;
4 routing the data packet, based on a destination for the data packet, from the first
5 switch to the second switch via said third switched virtual circuit; and
6 sending the data packet from the second switch through the second virtual circuit
7 to the second telephone.
- 1 3. The method of claim 2, wherein the data packet comprises voice data.
- 1 4. The method of claim 1, wherein said received data packet includes a header, the
2 method further comprising stripping the header from the data packet prior to routing and
3 then routing the stripped data packet to the second switch.
- 1 5. The method of claim 4, further comprising adding a header to the stripped data packet
2 subsequent to receiving the data packet at the second switch prior to sending the packet to
3 the second telephone.
- 1 6. The method of claim 2, further comprising converting telephone call data between an IP
2 network and an AAL2 network prior to routing the data packet.
- 1 7. The method of claim 2, further comprising converting the data packet between an
2 AAL5 network and an AAL2 network prior to routing the data packet.

1 8. A method for connecting a plurality of edge networks that straddle at least one core
2 network, the method comprising:

3 setting up at least one trunk according to a first protocol across the core network;

4 receiving data from at least a first edge network via a first multiprotocol

5 convergence switch (MPCS) associated with the first edge network; and

6 transmitting the data from the first multiprotocol convergence switch to at least a
7 second multiprotocol convergence switch, associated with the second edge network, via
8 the trunk.

1 9. The method of claim 8, wherein the plurality of edge networks are selected from the
2 group consisting of TCP/UDP/IP, AAL2 ATM, and AAL5 ATM networks.

1 10. The method of claim 8, wherein the data includes a header portion and further
2 comprising:

3 stripping the header portion from the data prior to routing a data packet to the
4 second MPCS; and

5 adding a replacement header to the data subsequent to receiving the data packet at
6 the second MPCS.

1 11. An Internet telephone switch, comprising:

2 means for switching data from a first channel on a first switched virtual
3 circuit/switched virtual path to a second channel on a second switched virtual
4 circuit/switched virtual path; and

5 means for stripping headers from IP traffic.

1 12. The Internet telephone switch of claim 11, further comprising means for converting
2 data among a TCP/UDP/IP network, an AAL2 ATM network, and an AAL5 ATM
3 network.

1 13. A method for transmitting a packet through an electronic network, the method
2 comprising:

3 setting up on a core network a plurality of switched virtual paths each having an
4 associated edge ATM switch, each switched virtual path comprising at least one switched
5 virtual circuit, each switched virtual circuit comprising at least one channel;
6 assigning a respective virtual path identification number to each switched virtual
7 path;
8 assigning a respective virtual circuit identification number to each switched virtual
9 circuit;
10 identifying a packet with a switched virtual path identification number and
11 with a switched virtual circuit identification number; and
12 transmitting the packet to the associated edge ATM switch using the switched
13 virtual path having the same virtual path identification number as the packet and the
14 switched virtual circuit having the same virtual circuit identification number as the packet.

1 14. The method of claim 13, further comprising:

2 setting up on the edge network at least one internal switched virtual path; and
3 routing the packet through the edge network using the internal switched virtual
4 path.

1 15. An multiprotocol convergence switch comprising:

2 at least one protocol stack;
3 at least one data transfer layer; and
4 at least one multiprotocol convergence switch controller.

1 16. The multiprotocol convergence switch of claim 15, wherein the protocol stack
2 comprises:

3 a UDP/IP stack; and
4 an ATM stack.

1 17. The multiprotocol convergence switch of claim 16 wherein the ATM stack comprises
2 at least one layer selected from the group consisting of an AAL2 layer and an AAL5 layer.

1 18. The multiprotocol convergence switch of claim 17 wherein data received from an
2 AAL5 stack user is passed to the AAL5 data transfer layer and data received from an
3 AAL2 stack user is passed to the AAL2 data transfer layer.

1 19. The multiprotocol convergence switch of claim 15 wherein the data transfer layer
2 includes at least one data transfer element.

1 20. The multiprotocol convergence switch of claim 15 wherein the switch controller
2 comprises:

3 a call agent communication element;
4 a UDP signaling element;
5 an ATM signaling element; and
6 a routing table.

1 21. A packet switched Internet telephone network comprising:
2 a first multiprotocol convergence switch;
3 at least a second multiprotocol convergence switch; and
4 at least a first ATM virtual circuit connecting the first and second multiprotocol
5 convergence switches.

1 22. The network of claim 21, further comprising a respective call agent associated with
2 each multiprotocol convergence switch for controlling the respective multiprotocol
3 convergence switch.

1 23. A method of header stripping comprising:
2 receiving, on a first input UDP port, a packet comprising a header and data;
3 using a first multiprotocol convergence switch to find, in a first routing table, a
4 first output UDP port associated with the first input UDP port;
5 using the first multiprotocol convergence switch to strip the header from the
6 packet;
7 storing the header within a call setup message;

8 sending the call setup message to a second multiprotocol convergence switch;
9 saving a header in a second routing table associated with said second multiprotocol
10 convergence switch, using the information in said call setup message;
11 using the first multiprotocol convergence switch to write the data to the first
12 output UDP port;
13 receiving the data at the second multiprotocol convergence switch on a second
14 input UDP port associated with the first output UDP port;
15 using the second multiprotocol convergence switch to retrieve the header from the
16 second routing table;
17 using the second multiprotocol convergence switch to find, in the second routing
18 table, a second output UDP port;
19 adding the header from the second routing table to the data to reconstitute the
20 packet; and
21 writing the packet to the second output UDP port.

1 24. The method of claim 23 further comprising:

2 using the second multiprotocol convergence switch to increment a packet ID and to
3 recalculate a checksum associated with the header to generate a new header; and
4 placing the new header in the second routing table.

1 25. A method for header stripping in a switched packet network, comprising:

2 establishing a first connection for transmitting a data flow comprising at least one
3 data packet, the data packet including data, a header, and an ID;
4 terminating the data flow into the packet-switched network at an ingress point;
5 determining a destination of the data packet;
6 determining a route through the network from the ingress point to the data packet
7 destination;
8 establishing a second connection comprising an AAL2 trunk from the ingress point
9 to an egress point;
10 establishing a third connection from the egress point to a data packet destination;
11 stripping the header from the data packet;

- 12 passing the header to the egress point;
- 13 placing the header in a routing table such that it is associated with the selected
- 14 route;
- 15 sending the data packet to the egress point;
- 16 retrieving the header from the routing table in accordance with the route by which
- 17 the egress point receives the data packet;
- 18 reattaching the header to the data packet; and
- 19 transmitting the data packet to the destination.

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